

In the field the bird appeared as a large black eagle, and its brilliant white back and rump were clearly seen as it turned in the sun; its bright yellow cere and feet were also noted. The white on the primaries was also apparent as it flew over: a good comparison of size was afforded as at the time four Griffon Vultures, *Gyps fulvus* (Hablitzl) were also in the air.

Reference:

Hartert, E. 1912-1921. *Die Vögel der Paläarkt. Fauna*, II, 1108-1109.

A new race of *Anthoscopus caroli* (Sharpe) from the Zambesi Valley

by MICHAEL P. STUART IRWIN

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Anthoscopus caroli rankinei, subsp. nov.

Type: ♀ adult. South bank of the Zambesi River, opposite Feira; Southern Rhodesia, on the border with Portuguese East Africa at approximately 15° 40' S., 30° 25' E. Altitude 1,350 ft. Collected by R. W. Rankine, 23rd September, 1959. In the National Museum of Southern Rhodesia. Collector's No. F.39. National Museum Registration No. 40884.

Description: Differs from *A. c. caroli* (Sharpe). *A. c. winterbottomi* White and *A. c. robertsi* Haagner, all of which have a distinctive olive wash on the mantle, in being entirely a dark slate-grey above, with a whitish, not buff frons; sides of face and ear-coverts also whitish, not buffy. The grey on the mantle is even greyer than in *A. c. sylviella* Reichenow and very considerably greyer than *A. musculus* (Hartlaub), to which it bears some superficial resemblance, especially on the under parts by being off-white, not tinged with buff; the chin, throat, breast and upper half of the abdomen being especially pale. The buffy colour on the abdomen and flanks is more restricted and pinkish in tone, though closest to *A. c. caroli*, showing little resemblance to *A. c. robertsi* which is a pale yellowish-buff, but approaching that form closely in the general paleness of the throat, chest and upper abdomen, though *A. c. robertsi* tends to have the under parts more sandy. The most striking feature of this new race is in the slate-grey of the back, though in the pallid frons, ear-coverts and in the under parts, it does not really match any of the geographically nearest populations.

Measurements of the type: Wing (flattened) 49.5; tail 29; culmen (to base of skull) 9; tarsus, 12.5 mm.

Material examined: The type and one other specimen; an adult ♂, minus the bill, obtained in the lower Mazoe valley, Southern Rhodesia, by R. H. N. Smithers as detailed below. This specimen agrees with the type in all respects and is without doubt referable to this new form. Despite the existence of only two specimens, I have no hesitation in describing this

race as new, as it differs so obviously from all the neighbouring populations that show a great amount of stability in respect of the mantle colour which never lacks the olive wash, and thus contrasting with this new grey-backed form. This second specimen measures: wing 52; tail 27 mm.

Range: At present known only from the type locality and from the Mkota Native Reserve on the lower reaches of the Mazoe River within Southern Rhodesia at 1,200 ft. adjacent to the Portuguese East African boundary at 16° 43' S., 32° 40' E. It would seem probable that this new form is restricted to a comparatively narrow section of the hot, dry, low-lying Zambesi valley, largely below 2,500 ft. from the region of about 30° E. Elsewhere on the plateaux on either side of the valley and in lowland coastal Portuguese Territory, it is replaced by olive-backed forms.

Remarks: The discovery of such an apparently distinctive race of this widespread and generally distributed species in this narrowly circumscribed region was unexpected. Previously the species was thought to be quite absent from the dry low-lying mopane tree country of the Zambesi and its main tributary valleys east from about the Victoria Falls gorges and the lowlands of Portuguese East Africa where *A. c. robertsi* appears. It would seem to be quite absent from the Kariba Lake basin and eastwards of Chirundu until *A. c. rankinei* reappears near the Portuguese border. By contrast elsewhere, the olive-backed group of forms are widespread in the rather similar hot low-lying country throughout the Limpopo River drainage within Southern Rhodesia, and occur also at the Sabi-Lundi River junction at 600 ft., and undoubtedly elsewhere in the Sabi valley as well. On the other hand further north, along the Zambesi-Luangwa drainages, these forms become restricted to the surrounding plateaux above about 3,000 ft., where they are virtually specific to the *Brachystegia* formations, avoiding the hot, low-lying country completely, though common until the lips of the escarpments are reached. C. W. Benson *in litt.* further confirms the absence of the species from anywhere within the Luangwa valley proper, though it now seems certain that *A. c. rankinei* must be found in the region of the Luangwa-Zambesi confluence.

Discussion: The type of *A. c. rankinei* is without ecological data, but the Mkota specimen was taken in a riparian acacia association, and this is the type of habitat in which it seems most likely to occur generally, as virgin mopane is largely unsuitable. Furthermore within the Limpopo valley the species is very largely associated with acacia and *Commiphora*, etc., and other dry-country types of small-leaved trees, and where similar associations occur in the Zambesi valley, especially on alluvial ground, it is most likely to be found.

In view of this new form's probable ecological specialisation, together with its circumscribed range and the fact that the plateau populations are restricted to *Brachystegia*, may cause a reduction in gene flow between the two population groups. Otherwise, within such a restricted area, the valley populations would tend to become swamped. On the other hand, strikingly different looking races of this species are known to intergrade over short distances, as happens between *A. c. winterbottomi* and *A. c. rhodesiae* Sclater in Northern Rhodesia. But here the differences can be correlated with an increase in precipitation, without at the same time any major ecological change. A similar type of thing happens in East Africa in the

case of *A. c. taruensis* van Someren and *A. c. sylviella*, both of which differ markedly from each other, but seem, nevertheless, closely related and occur very near to one another geographically, though apparently they differ ecologically. Thus *A. c. taruensis* ranges southwards from about the Tana River in the coastal savannah-forest mosaic, but in Tanganyika penetrates inland up some of the major river valleys such as the Pangani and Ruaha where it comes into close geographical proximity to the very different looking *A. c. sylviella*, which is largely, if not wholly, a highland form and in the south of its range apparently restricted to *Brachystegia* woodland. Dr. D. W. Snow *MS* revision and *in litt.*, gives *A. sylviella* specific rank on the basis of its distinctive colour and the fact that it approaches *A. c. taruensis* so closely, in eastern Tanganyika. But it would seem best at present to retain *A. sylviella* as a race of the *caroli* group, as it occupies rather a central position among several other rather clear-cut races. The distinctions here, as elsewhere, merely tend to accentuate the differences between two forms that have become separated ecologically in precisely the same way that *A. c. rankinei* appears to have become isolated from the surrounding populations.

It is perhaps worth mentioning that two recently collected specimens of *A. caroli* from near the top of the Zambesi Escarpment between 2,500–3,000 ft. in the Sipolilo District of Mashonaland, are still quite typical of the olive toned populations of *A. c. caroli*. These birds comprise a ♂♀ from the Umsengedzi River Gorge at approximately 16° 20' S., 31° 02' E. They further agree with another recent ♂ from Zana Farm at the northern end of the Umvukwe Range of hills at 16° 37' S., 31° 04' E. at an altitude of 4,000 ft. Thus in this sector, the ranges of *A. c. caroli* and *A. c. rankinei* are shown to approach each other to within a distance of some 70 miles and no doubt to the westward along the plateau on the escarpment, the gap will eventually be still further narrowed.

Geographical variation in the southern African populations of the Dusky Flycatcher *Muscicapa adusta* (Boie)

by WALTER J. LAWSON

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The Dusky Flycatcher *Muscicapa adusta* is restricted in southern Africa to the moister southern and eastern regions, extending from the southern Cape Province, Natal, Zululand, Swaziland and the eastern and north-eastern Transvaal, Moçambique, and the eastern regions of Southern Rhodesia to Northern Rhodesia and Angola northwards.

Within southern African subcontinental limits two races are currently recognised in the standard literature, these being *M. a. adusta* (Boie): Knysna, Cape Province, with a stated range of the southern part of the Cape Province to Natal and north to the eastern Transvaal, southern